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ABSTRACT

A study was undertaken to examine the relationship among parenting stress, maternal and child health, and medical utilization. Participants were patients from a large group pediatric practice. Mothers (N=56) of patients completed the Parenting Stress Index. Twelve months after completion of the Parenting Stress Index, subjects were assessed using the: (1) General Health Rating, which measured subjects' perception of their health status; (2) Medical Utilization for the Child, which gave frequency counts from the child's medical chart; (3) Mother's Health Care Seeking Behaviors, which measured the mother's report of her use of medical services; (4) Mother's Illness-Related Behaviors, which consisted of mother's monthly mean report of days in bed, non-prescription medicines used, etcetera; and (5) Traumatic Injuries, which gave frequency counts from child's medical charts. The results showed that maternal level of parenting stress appeared unrelated to obtaining medical services for young children. Inappropriate medical utilizaiton rates based on maternal stress did not occur for very young children. Maternal level of parenting stress was related to high rates of maternal use of medical services, illness-related behaviors, and maternal perceptions of health status. Low and moderate stress levels were not related to illness behaviors. Parenting stress was not shown to be related to traumatic injuries of the children, possibly due to the young age of this group of children, who were 12-24 months old when the observations were made. The Parenting Stress Index may be used in identifying parents under excessive stress who may later exhibit illness behavior. (ABL)

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PARENTING STRESS:

MATERNAL & CHILD HEALTH CORRELATES

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ABSTRACT

THE PRESENT STUDY EXAMINED THE RELATIONSHIPS BETWEEN AND AMONG THE VARIABLES OF PARENTING STRESS, MATERNAL AND CHILD HEALTH, AND MEDICAL UTILIZATION.

THE DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE ARE DESCRIBED IN TABLE #1.

METHODS & RESULTS

I. DATA COLLECTION

ALL PATIENTS WERE DRAWN FROM A LARGE GROUP PEDIATRIC PRACTICE (PEDIATRIC ASSOCIATES OF CHARLOTTESVILLE, VIRGINIA). THE MOTHERS HAD ALL TAKEN THE PARENTING STRESS INDEX (PSI) "INITIALLY" AS A PART OF THE PRACTICE'S NORMAL COMPREHENSIVE PEDIATRIC HEALTH CARE. THE PHYSICIANS INVITED PATIENTS TO VOLUNTEER FOR THE PRESENT STUDY.

THE SUBJECTS COMPLETED THE "SUBSEQUENTLY" USED MEASURES APPROXIMATELY 12 MONTHS FOLLOWING THE INITAL COMPLETION OF THE PSI AND GRANTED PERMISSION FOR THEIR MEDICAL RECORDS TO BE REVIEWED.

II. MEASURES USED

1. PARENTING STRESS INDEX (PSI)=101 ITEM MEASURE OF PARENTING STRESS DIVIDED INTO TWO DIVISIONS OF CHILD CHARACTERISTIC STRESSORS AND PARENTING CHARACTERISTICS--ABIDIN, R.R. (1983). PARENTING STRESS INDEX--MANUAL. PEDIATRIC PSYCHOLOGY PRESS, 320 TERRELL ROAD WEST, CHARLOTTESVILLE, VA 22901.

2. GENERAL HEALTH RATING (GHR)=35 ITEM MEASURE OF THE SUBJECTS' PERCEPTIONS OF THEIR HEALTH STATUS--DAVIES, A.R. AND WARE JR., J.E. (1981). MEASURING HEALTH PERCEPTIONS IN THE HEALTH INSURANCE EXPERIMENT. RAND CORPORATION, SANTA MONICA, CA 90406.

3. MEDICAL UTILIZATION FOR THE CHILD (MUC)=FREQUENCY COUNTS FROM THE CHILD'S MEDICAL CHART.

4. MOTHER'S HEALTH CARE SEEKING BEHAVIORS (MHCSB)=MOTHER'S REPORT OF HER USE OF MEDICAL SERVICES.

5. MOTHER'S ILLNESS-RELATED BEHAVIORS (MIRB)=MOTHER'S MONTHLY MEAN REPORT OF: DAYS IN BED, NON-PRESCRIPTION MEDICATIONS USED, NUMBER OF DIFFERENT SYMPTOMS, ETC.

6. TRAUMATIC INJURIES (TI)=FREQUENCY COUNTS FROM CHILD'S MEDICAL CHARTS OF TRAUMATIC INJURIES--LACERATIONS, BURNS, ACCIDENTAL POISONING, ETC.

III. QUESTIONS ASKED

1. ARE DIFFERENT LEVELS OF MATERNAL STRESS RELATED TO DIFFERENT RATES OF MEDICAL SERVICES UTILIZATION FOR THE CHILD?
   ANSWER: NO (SEE FIGURE #1).
2. ARE DIFFERENT LEVELS OF MATERNAL STRESS RELATED TO DIFFERENT RATES OF MEDICAL SERVICES UTILIZATION FOR THE MOTHER?
   ANSWER: YES (SEE FIGURES #2 & 3).
3. ARE DIFFERENT LEVELS OF MATERNAL STRESS RELATED TO DIFFERENT RATES OF MATERNAL ILLNESS-RELATED BEHAVIORS(MIRB)?
   ANSWER: YES (SEE FIGURE #4).
4. ARE DIFFERENT LEVELS OF MATERNAL STRESS RELATED TO DIFFERENT GENERAL HEALTH RATINGS (GHR)?
   ANSWER: YES (SEE FIGURES #5 & 6).
5. BETWEEN THE VARIABLES OF MATERNAL STRESS (PSI) AND MATERNAL GENERAL HEALTH RATING (GHR), WHICH IS A BETTER PREDICTOR OF MOTHER'S HEALTH CARE SEEKING BEHVIOR?
   ANSWER: MATERNAL STRESS (SEE TABLE #2).
6. CAN WE REPLICATE ABIDIN'S 1982 FINDING OF DIFFERENT RATES OF TRAUMATIC INJURIES FOR A YOUNGER GROUP OF CHILDREN WITH MOTHERS AT DIFFERENT LEVELS OF STRESS?
   ANSWER: NO (SEE TABLES #3 & 4).
   ABIDIN, R.R., PARENTING STRESS AND THE UTILIZATION OF PEDIATRIC SERVICES. CHILDREN'S HEALTH CARE, 1982, 11.2, 70-73.
7. ARE THE PARENTING STRESS INDEX SCORES AND GENERAL HEALTH RATINGS SCORES OF THE PARENTS IN THIS STUDY DIFFERENT FROM THE NORMS OF BOTH INSTRUMENTS?
   ANSWER: NO (SEE TABLE #5).

DISCUSSION

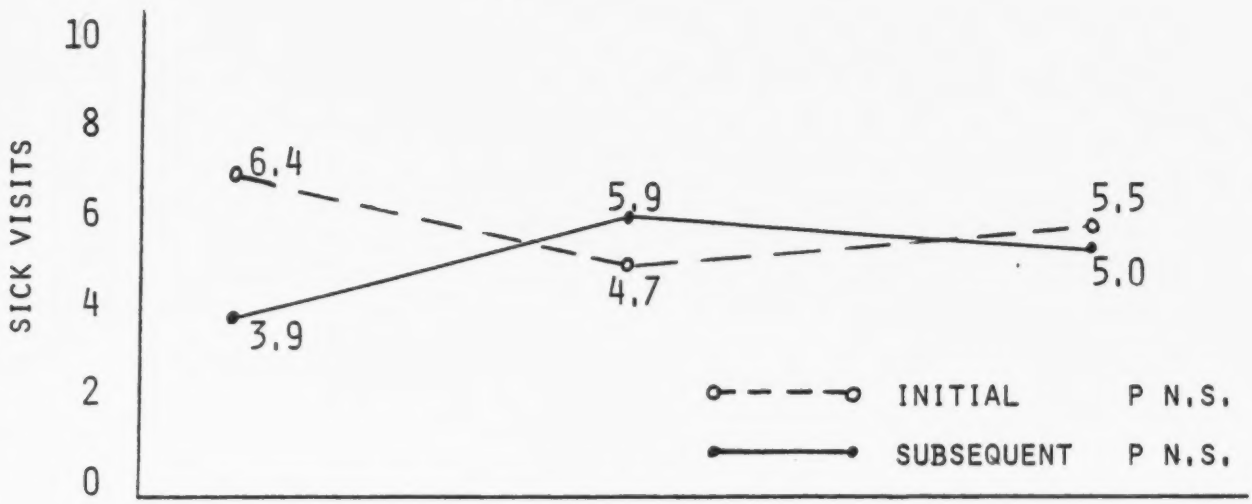
MATERNAL LEVEL OF PARENTING STRESS APPEARS UNRELATED TO OBTAINING MEDICAL SERVICES FOR YOUNG CHILDREN, AND THEREFORE INAPPROPRIATE MEDICAL UTILIZATION RATES BASED ON MATERNAL STRESS DO NOT APPEAR TO OCCUR FOR VERY YOUNG CHILDREN.

MATERNAL LEVEL OF PARENTING STRESS IS HIGHLY RELATED TO HIGH RATES OF MATERNAL USE OF MEDICAL SERVICES, TO ILLNESS-RELATED BEHAVIORS, AND TO MATERNAL PERCEPTIONS OF THEIR HEALTH STATUS. LOW TO MODERATE STRESS LEVELS DO NOT SEEM TO BE RELATED TO "ILLNESS BEHAVIORS," WHILE HIGH STRESS RESULTS IN A GREAT DEAL OF "ILLNESS BEHAVIOR" IN THE YEAR FOLLOWING THE STRESS MEASUREMENT. IT APPEARS THAT THE PARENTING STRESS INDEX MAY BE USEFUL IN IDENTIFYING PARENTS UNDER EXCESSIVE LEVELS OF STRESS WHICH MAY RESULT IN ILLNESS OR "ILLNESS BEHAVIOR."

THE RELATIONSHIP PREVIOUSLY REPORTED OF LEVELS OF PARENTING STRESS TO TRAUMATIC INJURIES IN CHILDREN WAS NOT REPLICATED IN THIS STUDY. THE YOUNGER AGE OF THIS SAMPLE (12-24 MONTHS AT THE TIME THE OBSERVATIONS WERE MADE) PROBABLY REFLECTS THE REDUCED OPPORTUNITY FOR TRAUMATIC INJURIES WHEN COMPARED TO THE PREVIOUS SAMPLE OF CHILDREN 24 TO 48 MONTHS OF AGE.

FIGURE #1

MEDICAL UTILIZATION* FOR CHILD
BY INITIAL AND SUBSEQUENT PARENTING STRESS LEVEL



PARENTING STRESS LEVEL (PSI)

	LOW	MODERATE	HIGH
INITIAL	N=10	N=31	N=15
SUBSEQUENT	N=16	N=34	N=6

*MEAN MONTHLY: SICK VISITS, EMERGENCY ROOM VISITS, VISITS TO OTHER PHYSICIANS, AND PHONE CALLS

FIGURE #2

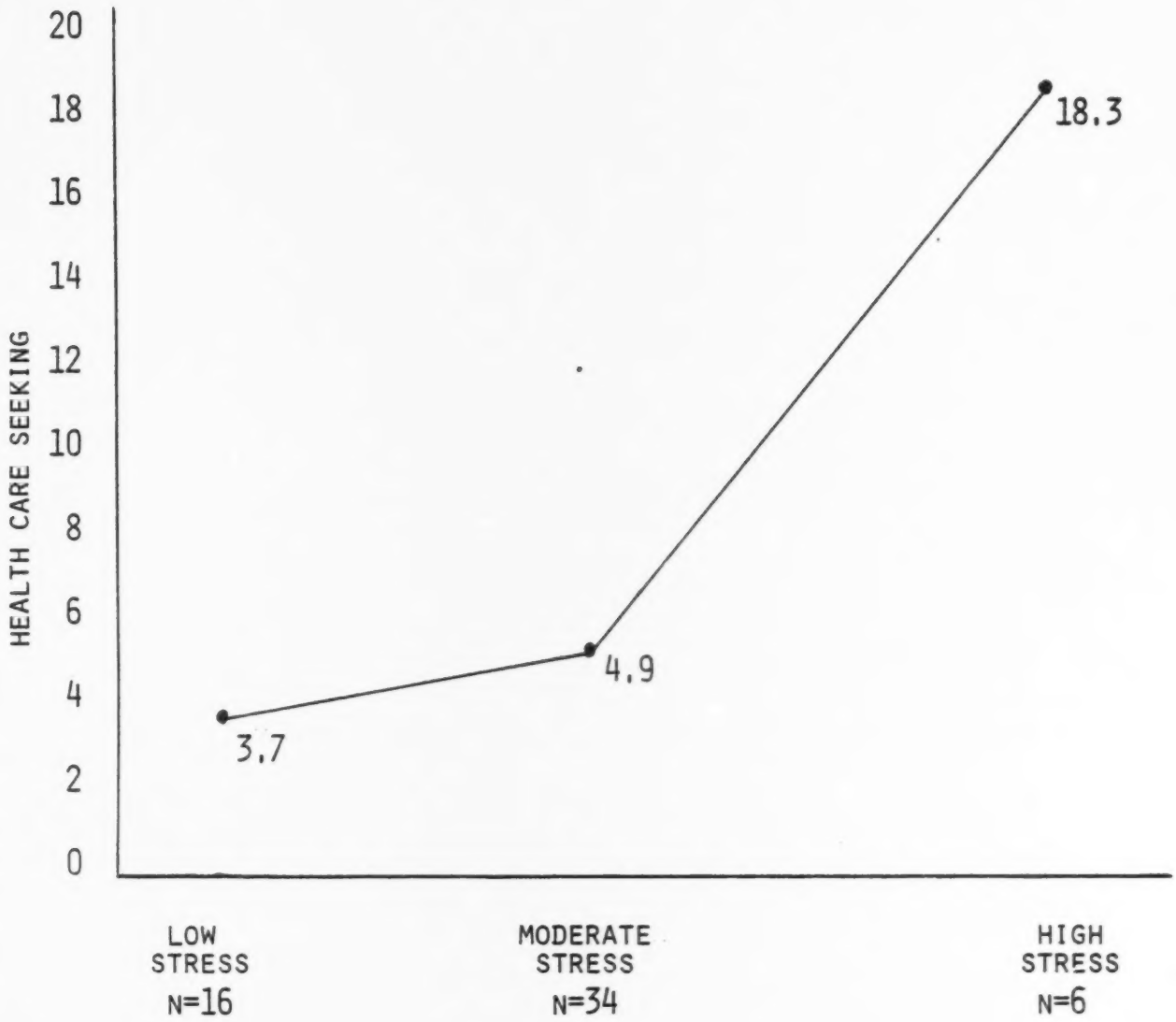
MOTHERS' INITIAL STRESS LEVEL AND MOTHERS' SUBSEQUENT 12 MONTH, MEAN[1] HEALTH CARE SEEKING BEHAVIORS

[1]MEAN DIFFERENCES: LOW STRESS VS. MODERATE--N.S.

LOW STRESS OR MODERATE STRESS VS. HIGH STRESS P=.00

FIGURE #3

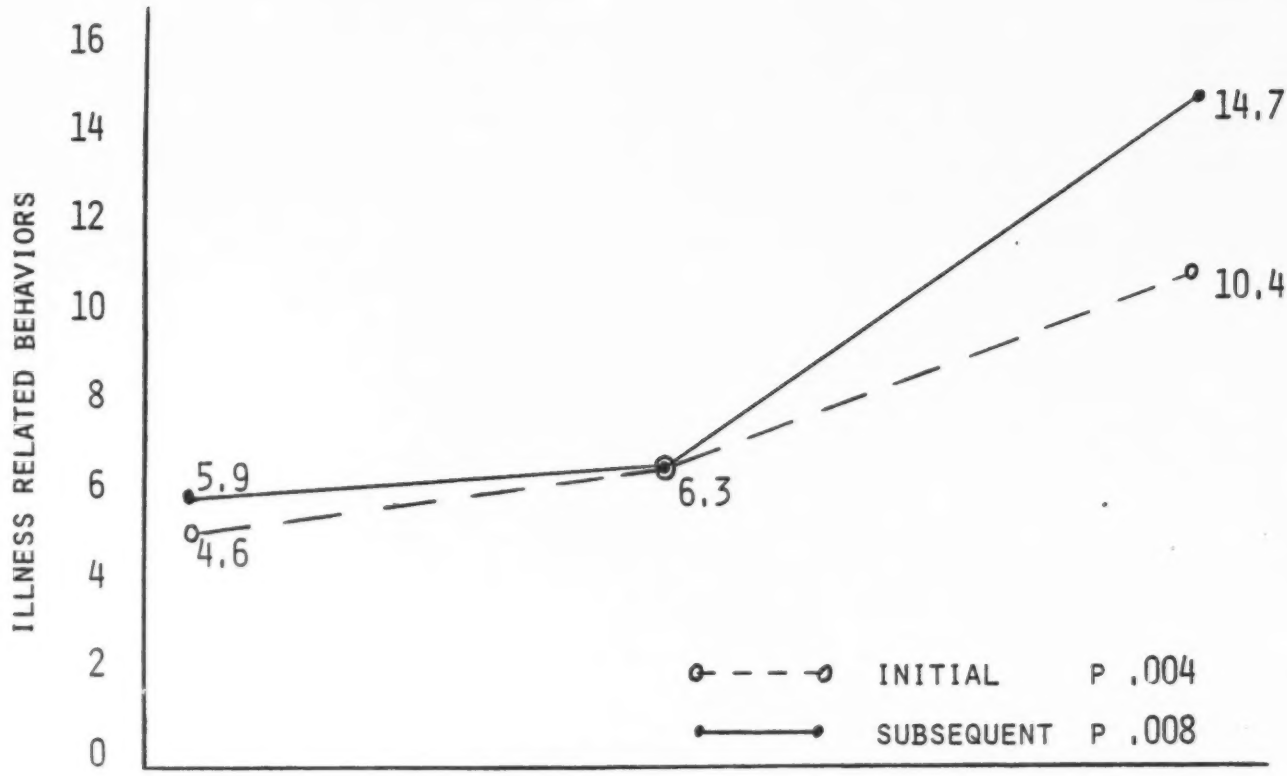
MOTHERS' SUBSEQUENT STRESS CATEGORY AND MOTHERS' MEAN[1] HEALTH CARE SEEKING BEHAVIORS FOR 12 MONTHS PRIOR TO STRESS MEASUREMENT



[1]MEAN DIFFERENCES: LOW STRESS VS. MODERATE--N.S.
LOW STRESS OR MODERATE STRESS VS. HIGH STRESS P=.00

FIGURE #4

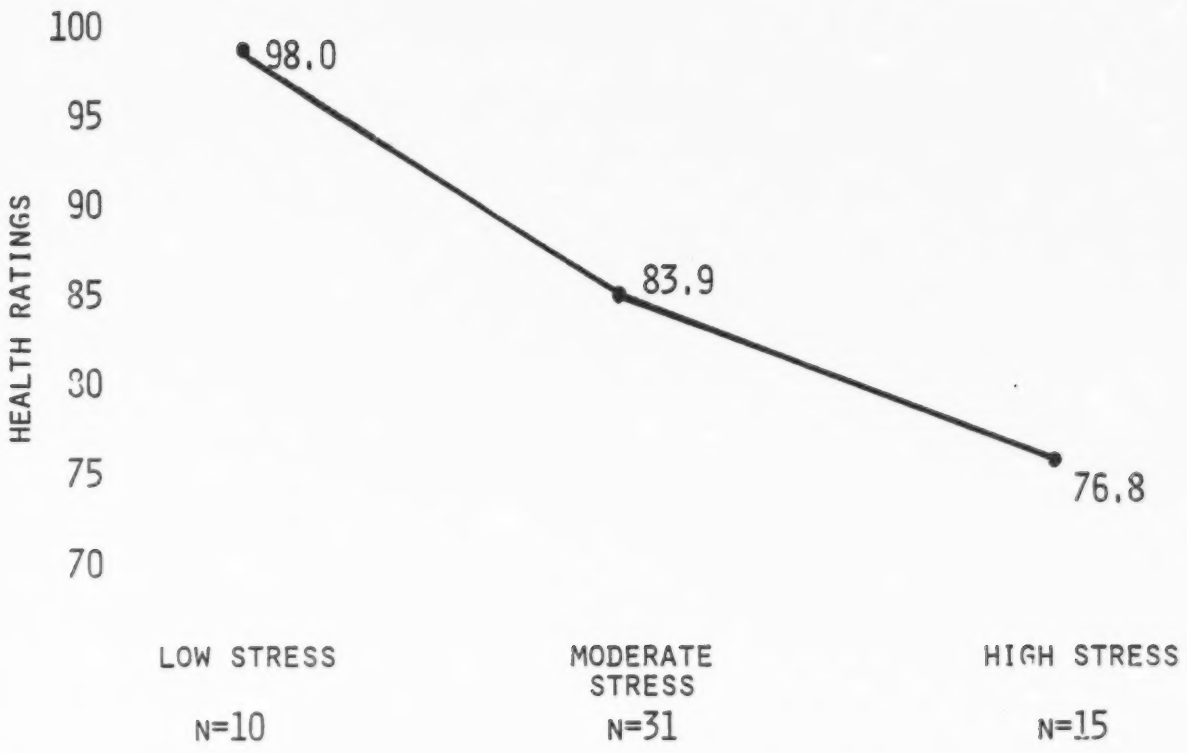
MOTHERS' MEAN ILLNESS RELATED BEHAVIORS
BY INITIAL AND SUBSEQUENT PARENTING STRESS LEVEL



	LOW	MODERATE	HIGH
INITIAL	N=10	N=31	N=15
SUBSEQUENT	N=16	N=34	N=6

FIGURE #5

INITIAL MATERNAL STRESS AND MEAN[1] GENERAL HEALTH RATINGS INDEX (RAND SCALE)[2]



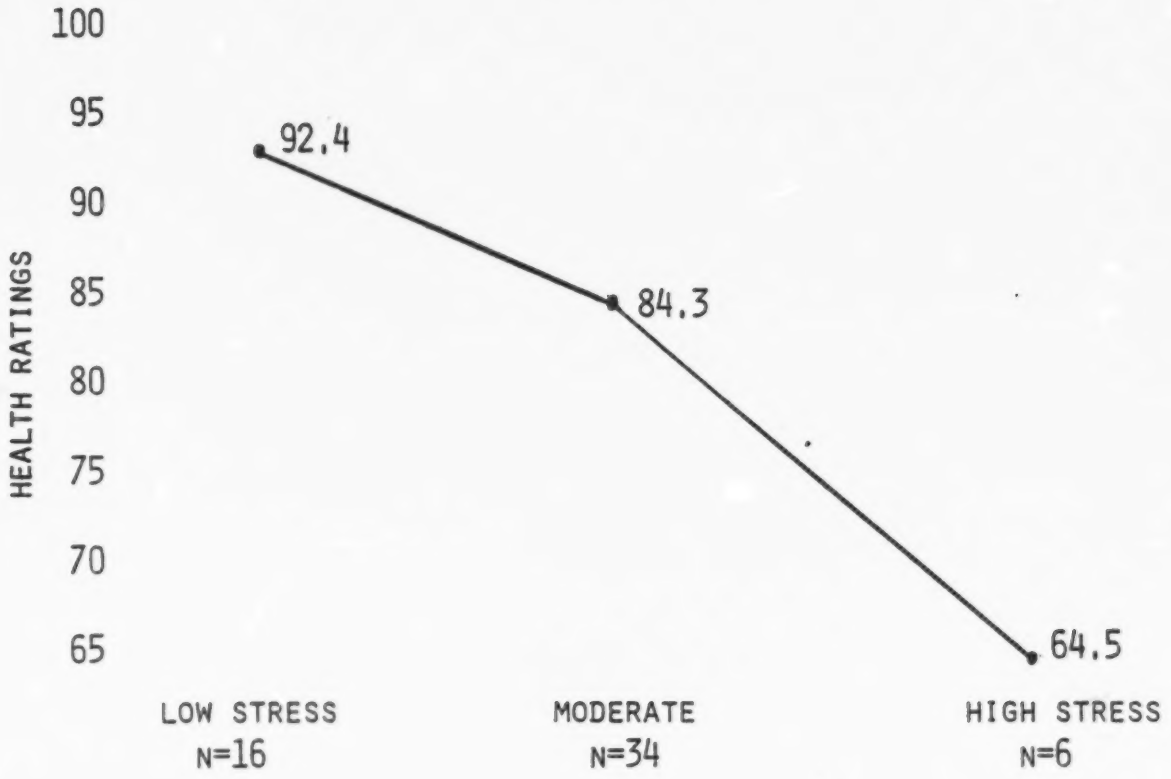
[1]MEAN DIFFERENCES AMONG STRESS LEVELS SIGNIFICANT AT .00

[2]PROBABILITY OF A PHYSICAL ILLNESS 98.0=10%; 76.8=22%
PROBABILITY OF AN EMOTIONAL IMPAIRMENT 98.0=7%; 76.8=20%

PROBABILITIES BASED ON THE RAND-HEALTH INSURANCE EXPERIMENT DATA--
RAND CORPORATION, SANTA MONICA, CALIFORNIA 90406

FIGURE #6

SUBSEQUENT MATERNAL STRESS CATEGORY AND MEAN[1] GENERAL HEALTH RATINGS INDEX[2]



[1]MEAN DIFFERENCE SIGNIFICANT AT .00

[2]PROBABILITY OF A PHYSICAL ILLNESS 92.4=15%; 64.5=50%
PROBABILITY OF AN EMOTIONAL IMPAIRMENT 92.4=10%; 64.5=50%

PROBABILITIES BASED ON THE RAND-HEALTH INSURANCE EXPERIMENT DATA--
RAND CORPORATION, SANTA MONICA, CALIFORNIA 90406

TABLE #1

PARENTING STRESS--MATERNAL AND CHILD HEALTH CARE CORRELATION

DEMOGRAPHIC CHARACHTERISTICS OF SAMPLE N=56

CHILDREN

SEX

34 MALE
22 FEMALE

AGE IN YEARS AT TIME OF SECOND MEASURE

MEAN 2.35
STANDARD DEVIATION 1.036
MINIMUM 1.4
MAXIMUM 5.3

BIRTH ORDER

44 FIRSTBORN

RACE

55 WHITE
1 BLACK

MOTHERS

AGE AT TIME OF SECOND MEASURE

MEAN 31.4 YEARS
STANDARD DEVIATION 3.8
MINIMUM 23.4
MAXIMUM 39.6

MARITAL STATUS

52 MARRIED
4 DIVORCED

INCOME LEVEL

29% UNDER $30,000
14% OVER $50,000
MEAN INCOME CATEGORY: $30 TO $35,000

MOTHER'S EDUCATION

HIGH SCHOOL	8
SOME COLLEGE OR VOCATIONAL	11
COLLEGE GRADUATE	22
GRADUATE OR PROFESSIONAL SCHOOL	15

FATHER'S EDUCATION

HIGH SCHOOL	10
SOME COLLEGE OR VOCATIONAL	8
COLLEGE GRADUATE	16
GRADUATE OR PROFESSIONAL SCHOOL	22

TABLE #2

MULTIPLE REGRESSION ANALYSIS
OF MOTHERS' HEALTH CARE SEEKING BEHAVIORS

VARIABLES IN THE EQUATION	DF	F LEVEL	R^2 CHANGE
INITIAL STRESS LEVEL-- TAKEN PRIOR TO RECORDING PERIOD FOR MOTHERS' HEALTH CARE SEEKING BEHAVIORS		4.025*	.147
GENERAL HEALTH RATINGS INDEX-- OBTAINED AT THE END OF 12 MONTHS' RECORDING PERIOD		2.395	.037
REGRESSION	2	5.984**	.184 (TOTAL)
RESIDUAL	53		

*P <.05 ** <.01

TABLE #3

ANALYSIS OF VARIANCE

TRAUMATIC INJURIES BY INITIAL STRESS SCORE & CHILD AGE

SOURCE OF VARIANCE	MS	DF	F	P
COVARIATES CHILD AGE	.002	1	.356	.55 N.S.
MAIN EFFECT INITIAL STRESS	.006	2	1.242	.30 N.S.
RESIDUAL (ERROR TERM)	.005	52		

TABLE #4

ANALYSIS OF VARIANCE

TRAUMATIC INJURIES BY SUBSEQUENT STRESS SCORE & CHILD AGE

SOURCE OF VARIANCE	MS	DF	F	P
COVARIATES CHILD AGE	.002	1	.351	.56 N.S.
MAIN EFFECT SUBSEQUENT STRESS	.004	2	.810	.45 N.S.
RESIDUAL (ERROR TERM)	.005	52		

TABLE #5

MEANS AND STANDARD DEVIATIONS FOR MOTHERS' PARENTING STRESS SCORES (PSI) AND GENERAL HEALTH RATINGS (GHR)

	PSI			GHR		
	INITIAL SCORES	SUBSEQUENT SCORES	NORMS		SUBSEQUENT	NORMS
MEAN	222.3	211.7	221.0	MEAN	84.5	83.4
S.D.	45.0	47.1	38.9	S.D.	14.5	13.5